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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Maureen J. Charron and Ellen B. Katz

Serial No. : 09/516,493

Filed : March 1, 2000

For : NOVEL GLUCOSE TRANSPORTER/SENSOR  
PROTEIN AND USES THEREOF

Art Unit : 1633

Examiner : Sumesh Kaushal

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Date of Deposit: Lisa M. Melanson

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

Name: June 29, 2001

Signature: Lisa Melanson

**AMENDMENT IN RESPONSE TO JUNE 1, 2001 OFFICE ACTION**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

This Amendment is submitted in response to the Office Action issued on June 1, 2001 in connection with the above-identified application. The Office Action contained a Notice to Comply With Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures (a copy of which is attached hereto as Exhibit A). A response to the Office Action is due on July 1, 2001. Accordingly, this Amendment is being timely filed.

Please amend the above-identified application as follows:

In the Specification:

Please replace the paragraph at page 6, line 26 with the following:

**B1** Figure 6 illustrates sequence alignment between murine GLUT4 (SEQ ID NO:1) and GLUTx (SEQ ID NO:2). Shaded regions indicate sequence similarity. Boxed regions

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B1  
cont.  
indicate sequence identity.

Please replace the paragraph at page 6, line 29 with the following:

B2  
Figure 7 illustrates sequence alignment between *Saccharomyces* RGT2 (SEQ ID NO:3), SNF3 (SEQ ID NO:4), and GLUTx (SEQ ID NO:5). Shaded regions indicate sequence similarity. Boxed regions indicate sequence identity.

Please replace the paragraph at page 7, line 5 with the following:

B3  
Figure 9 depicts a partial nucleotide sequence of human GLUTx (SEQ ID NO:6). The putative stop is depicted as T G A.

Please replace the paragraph at page 7, line 7 with the following:

B4  
Figure 10 depicts the predicted amino acid sequence (SEQ ID NO:7) encoded by the nucleotide sequence of (SEQ ID NO:6). "\*" indicates the putative carboxy terminus of the GLUTx protein. The region of sequence following "\*" (SEQ ID NO:8) represents a possible alternate carboxy terminus of the human GLUTx protein.

Please replace the paragraph at page 7, line 10 with the following:

B5  
Figure 11 depicts a partial nucleotide sequence of rat GLUTx (SEQ ID NO:9).

Please replace the paragraph at page 7, line 11 with the following:

B6  
Figure 12 depicts the predicted amino acid sequence (SEQ ID NO:10) encoded by the nucleotide sequence of SEQ ID NO:9.

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Please replace the paragraph at page 7, line 13 with the following:

B7

Figure 13 depicts a partial nucleotide sequence of mouse GLUTx (SEQ ID NO:11).

Please replace the paragraph at page 7, line 14 with the following:

B8

Figure 14 depicts the predicted amino acid sequence (SEQ ID NO:12) encoded by the nucleotide sequence of SEQ ID NO:11.

Please replace the paragraph at page 38, line 30 with the following:

B9

A polyclonal antibody was generated to the last 11 amino acids of the carboxy-terminus of the GLUTx protein. These amino acids are LEQITAHFEGR (amino acid residues 443 to 453 of SEQ ID NO:7). The antibody was used in Western blot analysis of different tissues from GLUT4 null and wild type mice and of mammary tumors induced by the mouse mammary tumor virus. A specific immunoreactive protein was found to be about 32.6 kD in testis, heart, fat, liver, diaphragm, and soleus muscle in both GLUT4 null and wild type mice. Further analysis revealed that GLUTx protein appears to be more abundant in GLUT4 null liver and testis than in the same wild type tissues. In contrast, the GLUT4 null fat seems to express less GLUTx protein than wild type fat. The Western blot analysis of the mouse mammary tumor showed an approximately 32.6 kD protein while normal mouse mammary tissue did not appear to have a band in this area.

In the Claims:

Please rewrite Claims 6, 7, 8, 9, 10, and 11 as follows: